

## Supplementary information

**Table S1: Search terms and search results from databases**

Database	Search Term	Search Results
Google Scholar	("Anopheles mosquito") AND ("temperature" OR "season") AND ("longevity" OR "fecundity" OR "gonotrophic cycle" OR "development time" OR "enzyme" OR "insecticide") TITLE-ABS-KEY ( "anopheles mosquito" OR "malaria" ) AND ( "temperature" OR season ) AND ( "development time" OR "survival" OR "longevity" OR "fecundity" OR "gonotrophic cycle" OR "biting rate" OR "enzyme" OR "insecticide" )	8130
Scopus	"Anopheles mosquito" AND ("temperature" OR "season") AND ("longevity" OR "fecundity" OR "gonotrophic cycle" OR "development time" OR "enzyme" OR "insecticide") ("Anopheles mosquito" ) AND ( "temperature" OR "season" ) AND ( "longevity" OR "fecundity" OR "gonotrophic cycle" OR "development time" OR "enzyme" OR "insecticide" ) ("anopheles mosquito" OR "malaria" ) AND ( "temperature" OR season ) AND ( "development time" OR "survival" OR "longevity" OR "fecundity" OR "gonotrophic cycle" OR "biting rate" OR "enzyme" OR "insecticide" )	5926
Science Direct	( "Anopheles mosquito" ) AND ( "temperature" OR "season" ) AND ( "longevity" OR "fecundity" OR "gonotrophic cycle" OR "development time" OR "enzyme" OR "insecticide" )	1403
PubMed	( "Anopheles mosquito" ) AND ( "temperature" OR "season" ) AND ( "longevity" OR "fecundity" OR "gonotrophic cycle" OR "development time" OR "enzyme" OR "insecticide" )	1156
ProQuest	( "Anopheles mosquito" ) AND ( "temperature" OR "season" ) AND ( "longevity" OR "fecundity" OR "gonotrophic cycle" OR "development time" OR "enzyme" OR "insecticide" )	850
Web of Science	( "Anopheles mosquito" ) AND ( "temperature" OR "season" ) AND ( "longevity" OR "fecundity" OR "gonotrophic cycle" OR "development time" OR "enzyme" OR "insecticide" )	17
Hand search		4

**Table S2: List of studies excluded with reasons**

Sn	Author name	Reason for exclusion
1	Abiodun et al. [1]	1
2	Abiodun et al. [2]	1
3	Abiodun et al. [3]	1
4	Agusto et al. [4]	1
5	Beck-Johnson [5]	1
6	Beck-Johnson et al. [6]	1
7	Beck-Johnson et al. [7]	1
8	Blanford et al. [8]	2
9	Charlwood and Braganca [9]	3
10	Christiansen-Jucht et al. [10]	1
11	Culler et al. [11]	1
12	Ewing et al. [12]	1
13	Glunt et al. [13]	2
14	Gonçalvez De Carvalho et al. [14]	3
15	Lindsay et al. [15]	4
16	Lunde et al. [16]	1
17	Lyons et al. [17]	1
18	Mordecai et al. [18]	2
19	Mukhtar et al. [19]	1
20	Murdock et al. [20]	2
21	Murdock et al. [21]	2
22	Okechukwu et al. [22]	4
23	Okuneye et al. [23]	1
24	Owiti and Christopher [24]	3
25	Owusu et al. [25]	2
26	Paaijmans et al. [26]	3
27	Paaijmans et al. [27]	2
28	Paaijmans et al. [28]	1
29	Parham and Michael [29]	1
30	Parham and Michael [30]	1
31	Parham et al. [31]	1
32	Shimaponda-Mataa et al. [32]	1
33	Wang et al. [33]	1
34	Wei-Ming et al. [34]	4
35	Yamana and Eltahir [35]	1
36	Zakharova et al. [36]	4

1 = mathematical models; 2 = Opinions/Letters/Reports; 3 = Study did not report on any of the outcomes of interest; 4 = Full text not available

## References

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